

CLAIMS

1. In a multimedia system, a method of interfacing media, said method comprising the steps of:

5 displaying continuously a first media data type on a display having contiguous lines, said display having a line-to-line correspondence with said first media data type;

requesting from a source device a first line of data of a second media data type before a predetermined line of data of  
10 said first media data type is displayed;

receiving said first line of data;

aligning said first line of data to said first media data type;

15 mixing said first line of data with said predetermined line of data; and

displaying said first line of data and said predetermined line of data concurrently on a predetermined line of said display without any interruption in the displaying of said first media data type.

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2. The method as described in Claim 1, comprising the further step of:

requesting on a line-by-line basis further lines of data of said second media data type, to be aligned to, mixed with,  
25 and displayed concurrently with said corresponding lines of data of said first media data type, before each of said

corresponding lines of data of said first media data type are displayed.

3. The method as described in Claim 1, comprising the  
5 further step of:

sending a retrace signal to said source device to indicate the beginning of an image to be shown on said display, said image to be taken from a group consisting essentially of:

10 a frame in the case of progressive mode; and  
a field in the case of interlaced mode.

4. The method as described in Claim 1, wherein said  
first media data type comprises video data and said second  
15 media data type comprises graphics data, said graphics data  
displayed in a resizable window.

5. The method as described in Claim 1, wherein said  
first media data type comprises graphics data and said second  
20 media data type comprises video data, said video data displayed  
in a resizable window.

6. The method as described in Claim 1, wherein said  
step of aligning comprises the further steps of:  
25 matching frame rates in the case of progressive mode or  
field rates in the case of interlaced mode; and

converting data of said second media data type to the same format as data of said first media data type.

7. The method as described in Claim 1, wherein said  
5 step of mixing comprises the further steps of:

overlaying said first line of data over said predetermined line of data; and

placing said first line of data within said window on said display.

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8. The method as described in Claim 1, wherein said  
step of mixing comprises the further steps of:

alpha blending said first line of data with said predetermined line of data; and

15 placing said first line of data within said window on said display.

9. The method as described in Claim 1, wherein said  
step of aligning comprises the further step of:

20 performing frame rate conversion.

10. The method as described in Claim 1, wherein said first line of data is received in a first-in-first-out-buffer (FIFO).

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11. In a multimedia system, a method of interfacing media types, comprising the steps of:

a) displaying continuously a first media data type on a display having contiguous lines, said display having a line-to-line correspondence with said first media data type;

5 b) sending a retrace signal from said first device to said source device to indicate the beginning of an image to be shown on said display;

c) requesting from a source device on a line-by-line basis a line of data of a second media data type before a corresponding line of data of said first media data type is  
10 displayed, said line of data of a second media data type to be displayed in a resizable window of said display;

d) receiving said line of data of a second media data type;

e) aligning said line of data of a second media data  
15 type to said first media data type;

f) mixing said first line of data with said corresponding line of data;

g) displaying said line of data of a second media data type and said corresponding line of data of said first media  
20 data type concurrently on a predetermined line of said display without any interruption in the displaying of said first media data type; and

h) repeating steps c) through g) until said image is displayed; and

25 i) repeating steps a) through h).

12. The method as described in Claim 11, wherein said image is to be taken from a group consisting essentially of:  
a frame in the case of progressive mode; and  
a field in the case of interlaced mode.

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13. The method as described in Claim 11, wherein said first media data type comprises video data and said second media data type comprises graphics data, said graphics data displayed in said window.

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14. The method as described in Claim 11, wherein said first media data type comprises graphics data and said second media data type comprises video data, said video data displayed in said window.

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15. The method as described in Claim 11, wherein said step of aligning comprises the further steps of:

matching frame rates in the case of progressive mode or field rates in the case of interlaced mode; and

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converting data of said second media data type to the same format as data of said first media data type.

16. The method as described in Claim 11, wherein said step of mixing comprises the further steps of:

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overlaying said first line of data over said predetermined line of data; and

placing said first line of data within said window on  
said display.

17. The method as described in Claim 11, wherein said  
5 step of mixing comprises the further steps of:

alpha blending said first line of data with said  
predetermined line of data; and

placing said first line of data within said window on  
said display.

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18. The method as described in Claim 11, wherein said  
display is taken from a list comprising essentially of:

SDTV;

HDTV;

15 VGA computer monitor;

CRTs; and

High Resolution Display.

20 19. A system comprising a processor, a memory unit, and  
a display screen wherein said memory contains instructions that  
when executed implement a method of interfacing media, said  
method comprising the steps of:

displaying continuously a first media data type on a  
25 display having contiguous lines, said display having a line-to-  
line correspondence with said first media data type;

requesting from a source device a first line of data of a second media data type before a predetermined line of data of said first media data type is displayed;

receiving said first line of data;

5 aligning said first line of data to said first media data type;

mixing said first line of data with said predetermined line of data; and

displaying said first line of data and said predetermined  
10 line of data concurrently on a predetermined line of said display without any interruption in the displaying of said first media data type.

20. The method as described in Claim 19, comprising the  
15 further step of:

requesting on a line-by-line basis further lines of data of said second media data type, to be aligned to, mixed with, and displayed concurrently with said corresponding lines of data of said first media data type, before each of said  
20 corresponding lines of data of said first media data type are displayed.

21. The method as described in Claim 19, comprising the further step of:

25 sending a retrace signal to said source device to indicate the beginning of an image to be shown on said

display, said image to be taken from a group consisting essentially of:

- a frame in the case of progressive mode; and
- a field in the case of interlaced mode.

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22. The method as described in Claim 19, wherein said first media data type comprises video data and said second media data type comprises graphics data, said graphics data displayed in a resizable window.

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23. The method as described in Claim 19, wherein said first media data type comprises graphics data and said second media data type comprises video data, said video data displayed in a resizable window.

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24. The method as described in Claim 19, wherein said step of aligning comprises the further steps of:

matching frame rates in the case of progressive mode or field rates in the case of interlaced mode; and

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converting data of said second media data type to the same format as data of said first media data type.

25. The method as described in Claim 19, wherein said step of mixing comprises the further steps of:

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overlaying said first line of data over said predetermined line of data; and



placing said first line of data within said window on  
said display.

26. The method as described in Claim 19, wherein said  
5 step of mixing comprises the further steps of:

alpha blending said first line of data with said  
predetermined line of data; and

placing said first line of data within said window on  
said display.

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27. The method as described in Claim 19, wherein said  
step of aligning comprises the further step of:

performing frame rate conversion.

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28. The method as described in Claim 19, wherein said  
first line of data is received in a first-in-first-out-buffer  
(FIFO).

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